



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: V2500-A1  
 UNIQUE ID NUMBER: 1IA001  
 COMBUSTOR:  
 ENGINE TYPE: MTF

BYPASS RATIO: 5.3  
 PRESSURE RATIO ( $\pi_{00}$ ): 29.8  
 RATED THRUST ( $F_{00}$ ) (kN): 111.2

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	1.0	18.2	80.3	4.5
AS % OF ORIGINAL LIMIT	5.1	15.4	80.7	19.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			100.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			120.5	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			136.9	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			161.1	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	1.113	0.10	0.55	37.13	
CLIMB OUT	85	2.2	0.924	0.11	0.55	30.82	
APPROACH	30	4.0	0.334	0.15	0.77	13.45	
IDLE	7	26.0	0.124	0.22	7.76	5.91	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			442	73	1656	7716	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.7	14.8	69.3	3.5
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 4.5 (% CORE FLOW) AT 0.07 POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.3
TEMPERATURE (K)	286
ABS HUMIDITY (kg/kg)	0.0048

### FUEL

SPEC	Jet A
H/C	1.87
AROM (%)	

MANUFACTURER: International Aero Engines  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: East Hartford, CT  
 TEST DATES: 02/06/1988-02/06/1988

### REMARKS

1. V2500 renamed V2500-A1 2. Engine Type description originally wrongly given as TF; amended in Issue 15 to MTF

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)